



JAPANESE FOREIGN MILITARY SALES (FMS) PROGRAM

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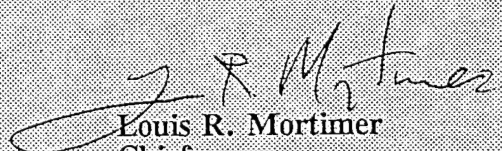
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13. ABSTRACT (Maximum 200 words) This study discusses policies and laws governing Japan's defense industry and foreign military sales, including the three nonexport principles that were introduced in 1967 and were later extended to prohibit exports of arms factories as well as weaponry. Other topics analyzed included sales of military technology to the United States; prospects for the export of defense-related technology to China, the USSR, and Eastern Europe; and the structure and funding of government support to the defense industry, including government-sponsored military research and development.					
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PREFACE

This study is part of a series of reports on the foreign military sales (FMS) programs of major arms-producing nations in the Free World. It has been prepared in an attempt to compile available information on how nations conduct foreign military sales. Of particular interest for each nation treated are laws governing arms exports, FMS procedures, sales promotion, and governmental export assistance.

This report is based on information from a wide range of open sources, including newspapers, periodicals, books, and official documents.

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GLOSSARY

DPC	Defense Production Committee of the Federation of Japanese Industries
COCOM	Coordinating Committee for Control of Exports to Communist Countries
DRDU	Defense-related dual-use
JDA	Japan Defense Agency
KEIDANREN	Federation of Japanese Industries
LDP	Liberal Democratic Party
MITI	Ministry of International Trade and Industry
SDF	Self-Defense Forces
TRDI	Technical Research and Development Institute of the Japan Defense Agency

SUMMARY

Japan's defense industry has grown in size and sophistication since the Korean War (1950-53) and now provides some 90 percent of Japan's military equipment and technology. Much current production is conducted under license with US or other foreign firms. The industry is made up of some 2,000 companies, most of which are subcontractors. Defense contracts account for less than 10 percent of the business of major defense contractors except in the aviation sector, which is about 85 percent defense related.

Limitations on Japan's defense industries include a ban on exports of weaponry and munitions plants and a policy limiting defense spending to one percent of GNP. Lobbyists for the industry seek a change in both policies. Other prospects for the industry include further indigenization of weapons technology and an expansion in development, production, and sale of defense-related, dual-use (DRDU) technology.

Japan's foreign military sales program is governed by a combination of laws, principles, and interpretive opinions of the prime minister and cabinet officials. The Government of Japan has effectively prevented its political opponents from converting the non-export principles into binding law and is able to modify them by redefinition and gradual, consensus-building efforts. For example, the Japanese Government redefined the non-export principles over a 6-year period from 1978 to 1983 to allow the sale of military technology to the United States. Many observers in the defense industry and in the political opposition believe that the resulting 1983 technology-transfer agreement with the United States will open the door to increased military exports. The agreement also confirms the Japanese Government's position of not restricting the export of DRDU technology or equipment.

Despite Japan's policy of not exporting arms, Japan's foreign military sales, including weaponry, non-lethal military equipment, and dual-use equipment, averaged \$100 million per year from 1977 through 1983.

The Japan Defense Agency (JDA) conducts research and development (R&D) through its Technical Research and Development Institute (TRDI). Government R&D expenditures are small compared with the defense budget, but are a significant amount--4.8 percent--when compared with industry sales. Private sector defense-related R&D may also be higher than commonly believed, since companies are probably required to contribute their own R&D funds to joint projects with TRDI in hopes of getting procurement contracts.

For many years, Japan has exported sensitive technology to China, the Soviet Union, and Eastern Europe under guidelines of the Coordinating Committee for Control of Exports to Communist Countries (COCOM). COCOM restrictions on trade with China were eased in 1984, but have become stricter for trade with the USSR following the Soviet invasion of Afghanistan. Japanese businesses tend to perceive COCOM rules as a tool of US commercial interests and may be expected to continue to take them less seriously than the Japanese Government, which has taken steps to cooperate more closely with the restrictions.

JAPAN'S DEFENSE INDUSTRY

Restricted after World War II, the Japanese defense industry resumed its activities with US "special procurement" of war materiel and weapons at the start of the Korean War in June 1950. By the end of the war, Japanese defense industries were producing a number of infantry weapons and ammunition, including mortars, rocket launchers, recoilless rifles, and hand grenades, as well as quartermaster goods, transport machinery, metal POL tanks, and repair services.

Continuing US orders after the war, especially in the field of conventional and jet aircraft repair, played an important role in the growth and revitalization of Japan's defense and aviation industries. By the 1980s, Japan was producing some 90 percent of its own military equipment and technology.

Structure of Japan's Defense Industry

Japan's defense industry is made up of a relatively small number of prime contractors and a larger number of subcontractors. Most of the Japan Defense Agency (JDA) procurement budget goes to a relatively small number of firms. In Japanese fiscal year 1985 (April 1985 to March 1986), for example, 10 companies accounted for almost 64 percent of \$5.2 billion (at ¥240: \$1) in JDA procurement contracts. The top seven firms, by market share, were:

Table

Major Defense Contractors

<u>FIRM</u>	<u>Market Share</u>
o Mitsubishi Heavy Industries (MHI)	19.6 percent
o Kawasaki Heavy Industries (KHI)	10.7 percent
o Mitsubishi Electric Corp. (MELCO)	9.1 percent
o Toshiba Corp.	6.4 percent
o Ishikawajima-Harima Heavy Industries (IHI)	6.1 percent
o Nippon Electric Co. (NEC)	3.6 percent
o The Japan Steel Works, Ltd.	2.5 percent

Source: Nihon Keizai Shimbun (Tokyo), 8 April 1986, p. 8.

The "unchanging five" top firms were also the leading contractors in 1980 and during most of the intervening years to 1985.

In 1984 the largest contracts were awarded for the following defense items:

Table
Major Defense Contracts in 1984

<u>Contract</u>	<u>Prime Contractor</u>
F-15 fighters	MHI
P3-C anti-submarine patrol aircraft	KHI
F-15 engines	IHI
Hawk missiles	MELCO
BADGE air-defense system	NEC

Source: JPE Aviation Report-Weekly (Tokyo), 22 April 1985, pp. 4-6, reprinted in JPRS-JST-85-047-L, 30 May 1985, pp. 72-73.

A 1977 Federation of Japanese Industries (Keidanren) study surveyed about 67 prime contractors in four fields.

Table
67 Prime Contractors (1977)

<u>Fields</u>	<u>Number of Firms</u>
aircraft and engines	8 companies, including IHI, MHI, KHI, Shin Meiwa, and Fuji Heavy Industries
vendors (aircraft sales)	16 firms (engines)
combat ships	8 companies (11 dock-yards)
weapons	35 companies

Source: Kazuo Tomiyama, Nihon no Boei Sangyo [Japan's Defense Industry] (Tokyo), 1979, transl. in Japan Report, JPRS L/9379, 31 October 1980, pp. 43ff.

Each of these companies relies on numerous subcontractors. For example, the YS-11, a Japanese-designed passenger plane, of which 23 were delivered to the JDA in the 1960s, was contracted for by the Japan Aeroplane Manufacturing Company and built by that company and five others. Suppliers of parts numbered approximately 135, and there were numerous other subcontractors as well. There are more than 2,000 firms listed by the Japanese Government as defense industry firms.

Except in the aviation industry, defense contracts account for under 10 percent of the overall business of the largest Japanese companies. About 85 percent of the aviation industry's business is related to defense.

Japanese Government Support

Japan Defense Agency procurement is the major form of support for Japan's defense industries. A system of option contracting instead of open bidding provides stable orders and helps manufacturers acquire and build on experience and keep their plants active. Since 1978, the JDA has been permitted to prepay as little as 20 percent of the contract amount, letting the government initiate more contracts within a given budget.

A government policy to shift from US to domestic procurement, beginning with the third defense program initiated in 1967, played an important role in the expansion of Japan's defense production. Domestic procurement grew between 20 and 25 percent annually during the late 1970s and early 1980s.

Close personal ties between the JDA and defense industries facilitate government support of the industry. Through the custom of amakudari (descent from heaven), in which retiring government officials secure high-paying positions in industry, a large number of high ranking Self Defense Forces (SDF) officers are hired by major defense companies following their retirement from government service. In 1978, for example, 123 retired general officers were employed by 17 defense contractors.

Defense Industry Lobby

A number of organizations lobby for the interests of the defense industry. For example, the Defense Production Committee (DPC) of Keidanren, which includes representatives from about 90 defense manufacturers, prepares suggestions and proposals for submission to the government. Since about 1977, the DPC has proposed that 2 percent of the Japanese budget, instead of 1 percent, be dedicated to defense and that 2 percent of the defense budget be reserved for research and development (R&D). The DPC has also frequently advocated more relaxed arms export guidelines.

The Defense Production Technology Association, founded in April 1980, is a joint government-industry weapons technology research organization reportedly funded from private sources. Its first head was a former director of the JDA Technical Research and Development Institute (TRDI), and many advisors were officials of key Japanese industries. Technicians employed by the Association include many JDA retirees.

The Institute for Peace and Security, headed by Masamichi Inoki, is another organization that supports greater development of weapons technology by Japan, including exports of weapons systems or components in a division of labor with the United States and Western Europe.

Additional backing for Japan's defense industry comes from the Japanese Chamber of Commerce and Industry, which has at times advocated expansion of permissible exports. The New Overall Policy Research Group of the Liberal Democratic Party (LDP) has also advocated more domestication of Japan's defense production.

Limits to Growth

Japanese defense industries reached the limits of growth in the early 1980s, influenced by the following economic and political factors:

- success and maximum achievement of local production program;
- economic slowdown;
- 1 percent limit on spending in military budget; and
- little possibility for export under the three principles on non-export of arms (see below).

Another factor limiting the shift to domestic production, and thus the growth of the defense industry, in the late 1970s was the fact that some technology could not be produced in Japan and still had to be imported. There were also items of equipment, such as the P3-C surveillance aircraft, that were far too costly to develop and produce in Japan, given the relatively small procurement needs of the Self-Defense Forces (SDF).

Prospects

In view of growth limitations, Japanese defense industry leaders are now pinning their hopes for expansion on two developments. One is developing Japanese technology to replace US technology now used under license, an approach which has had some success. For example, Japanese companies can now make ground-forces vehicles that have been developed in Japan, such as the T-74 tank, some domestically developed missiles, and basic aircraft such as the T-2 trainer.

The second hope of defense-industry spokesmen is for modification of the three principles on exports of arms. Since at least 1977, the defense industry has continually urged increases in the defense budget and in defense R&D as well.

The 1983 technology transfer agreement between Japan and the United States (see below) is viewed by both its critics and supporters as weakening the three non-export principles and clearing the way for some expansion of high-tech defense industries.

LAWS, POLICIES, AND AGREEMENTS GOVERNING JAPAN'S FOREIGN MILITARY SALES

Laws, Principles, and Interpretations

As are other defense-related matters, Japan's foreign military sales are governed by a combination of laws, "principles" (gensoku), and interpretive "opinions" (kenkai) of the government. Laws usually provide detailed technical guidance or rules for agencies and ministries to follow, for example by providing a legal definition of the term "weapon," or by enumerating the procedures to be followed in exporting merchandise or other goods. Laws, which leave little room for interpretation, must be passed by the Diet and are subject to the legislative process.

Principles are long-term policy commitments of the Japanese Government having broad public support, such as the three non-nuclear principles (not to manufacture, possess, or to introduce nuclear weapons) first announced in 1967, or the three arms non-export principles, announced in the same year. Principles are formulated by the government alone, sometime in an effort to forestall a Diet effort to pass legislation that the government might view as overly restrictive.

The Japanese Government uses "opinions" to explain how the government intends to implement its policies as it understands the relationships among the Constitution, laws (or treaties), and principles. Such opinions are unilaterally announced by the government (often after extensive consensus building and coordination among government ministries and agencies) and do not require the approval of the Diet. However, the Diet may express its own interpretation of laws, principles, and policies of the government in non-binding resolutions (ketsugi).

The Japanese Government often uses interpretive opinions in long-term campaigns to influence public consensus in order to modify previously sacrosanct defense-related policies. This process may require a number of years. An example in the field of foreign military sales is the modification of the three non-export principles to allow the transfer of military technology to the United States, which took about 6 years, from 1978 to 1983.

Table

Use of Government Opinions to Reinterpret
the Three Non-Export Principles, 1978-1983

<u>Year</u>	<u>Event</u>
1978	Japan announces plan to study joint development and transfer to the United States of selected defense-related dual-use (DRDU) technology.
1981	The United States publicly proposes close cooperation with Japan in development and sale of DRDU technology.
1982	Japan's Foreign Minister tells the Diet that joint US R&D on weapons systems will not fall under arms-export restrictions.
1983	January--The Cabinet "takes note" of completed studies approving the transfer of arms technology to the United States under the Mutual Security Treaty. March--A State Minister tells the Diet that government approval of transfer of arms technology to the United States does not violate the three non-export principles. November--The United States and Japan sign a note providing for transfer of arms technology to the United States. The agreement also confirms the absence of restrictions on transfer of DRDU technology.

Laws Authorizing Defense Production

Several laws or other legal enactments authorized and defined the scope of Japanese arms production following World War II. In March 1952, a US General Command Directive officially authorized Japanese production of weapons and aircraft, and in April 1952 the Japanese Government revised the Potsdam Ministerial Decree to allow systematic arms production. The Weapons Manufacture Act of August 1953 permits government regulation and coordination of the defense industries through a permit system.

The Self-Defense Forces Law of 1949 does not mention arms exports, but provides for "arms" a broad definition that includes lethal or destructive "machines, tools, or equipment" used as a method of military warfare. Ships, aircraft, or vehicles that carry such equipment are also considered to be arms.

The definition of "arms" was further clarified in February 1976 by Prime Minister Takeo Miki in a statement to the Standing Committee of the Budget of the House of Representatives. "Weapons" included items "used by the military and supplied for direct combat use."

Trade Laws

Weapons exports require the approval of the Minister of International Trade and Industry in accordance with the Exchange and Foreign Trade Law No. 228 of 1949 and the Export Trade Control Law No. 378 of 1949. The term "arms" in the three non-export principles refers to items 197 through 205 in Appendix I of the Export Trade Control Law.

Table

Arms as Defined by the Three Principles Governing Arms Export

<u>Item No.</u>	<u>Category</u>
197	firearms, cartridges, and parts
198	ammunition (excluding cartridges) and related equipment
199	explosives (excluding ammunition) and jet fuel
200	explosive stabilizers
201	military vehicles and parts thereof
201-2	military vessels, hulls, and parts
201-3	military aircraft and parts
202	anti-submarine and anti-torpedo nets
203	armor plates, military steel helmets, and bullet-proof clothing
204	military searchlights and control equipment
205	bacterial, chemical, and radioactive agents and related equipment

Source: Export Trade Control Law No. 378 (1949), Appendix I.

Japan's Three Non-export Principles

There was no general prohibition against defense industry exports during the period from 1953 to 1967. In April 1967, Prime Minister Eisaku Sato announced to a Diet committee three principles governing the non-export of arms. According to these principles, the Ministry of International Trade and Industry (MITI) would no longer approve arms exports to Communist bloc countries, countries to which a United Nations resolution has prohibited arms exports (at the time South Africa), or to a country currently in a state of conflict or soon likely to be in a state of conflict.

In February 1972 MITI Director (later Prime Minister) Kakuei Tanaka extended the three non-export principles to include policy restrictions on military sales to countries not previously named. The principles were also extended by defining weapons factories as "arms" in the sense prescribed by the Export Trade Control Law. This followed disclosure of Japanese technical cooperation with South Korea in the establishment of Pohang Steel, a plant with capabilities for the production of special steel and weapons.

Despite Tanaka's statement, Japanese arms exports expanded in real terms during the period from 1972 to 1976, as compared with the preceding 5-year period. Japan's arms exports during the period from 1967 through 1971 totalled \$48 million (in 1975 constant dollars), then doubled to \$97 million during the period from 1972 through 1976.

In 1977, the Japanese Government prohibited investment in foreign defense industries. This ban was reconfirmed in a 1981 resolution by both Houses of the Diet. Following disclosures of violations of the export ban, this more restrictive policy--including the ban on export of munitions factories--was reaffirmed by Diet resolutions in 1981 and 1983. However, the government successfully resisted the efforts of opposition political parties to have the export ban written into law.

The Japan-US Technology Transfer Agreement

In an exchange of notes in November 1983, Japan agreed to allow the export of military technology to the United States and affirmed that no special restraints existed on the transfer of defense-related dual-use (DRDU) technology.

In July 1984 and April 1985, the US Office of the Undersecretary of Defense for Research and Engineering sent a Technology Assessment Team, made up of experts in the fields of electro-optics and millimeter-wave technologies, to Japan to visit companies active in these fields. The team began a US-Japan dialog on technology exchange and identified items, manufacturing methods, and design and test data of interest to the United States.

Table

Japanese DRDU Technologies of High Interest to the United States

Design/test data

Optical Data Storage
DFB (distributed feedback) Lasers at 1.3 Micron
HgCdTe (Mercury-Cadmium-Tellurium)
Laser Diodes

Production Methods and Know-how

Fiber Optic LANs (local area networks)
GaAs (Gallium Arsenide) Wafers
Liquid Crystal Displays
Electric Luminescent Displays

Potential Supply Source

Solid State Imager Chips
Laser Diodes
High Density Memories

Source: "Electro-optics Millimeter/Microwave Technology in Japan," Report of DOD Technology Team (Washington, DC), May 1985, p. iii.

Detailed arrangements for the sale of military technologies to the United States were completed in December 1985.

JAPAN'S FOREIGN MILITARY SALES

As US procurement in Japan declined in the late 1950s, Japanese exports of weapons and ammunition began to increase, totalling about \$3.5 million during the period from 1956 to 1966. From 1967 to 1976, this sum increased to an annual average of \$12.5 million (current). From 1977 through 1983, Japanese defense industry exports including non-lethal military equipment and dual-use equipment averaged \$100 million (current) per year.

Table

Japan's Foreign Military Sales, 1967-1983

<u>Year</u>	<u>Defense Exports (current \$ mil)</u>
1967	4
1968	7
1969	14
1970	6
1971	2
1972	12
1973	20
1974	20
1975	30
1976	10
1977	30
1978	90
1979	50
1980	60
1981	200
1982	70
1983	200

Source: US Arms Control and Disarmament Agency, World Military Expenditures and Arms Transfers, 1967-1976, and World Military Expenditures and Arms Transfers 1985 (Washington, DC: 1978, 1985.)

RESEARCH AND DEVELOPMENT

Government Research and Development

The JDA began R&D of military technology in the 1950s to improve the quality of defense industry production and to increase the domestically produced component of Japanese military equipment. A series of research programs conducted in the 1960s and 1970s supported increasing domestic production of military hardware, including products made under foreign license.

The JDA administers programs of research and testing through the TRDI, its own research organ. The TRDI has five research centers and a number of testing centers and also cooperates with domestic defense manufacturers. In cooperative projects, the TRDI sets topics and private sector companies conduct research and the development of prototypes. When the prototype is developed, the government may award the company a mass-production contract.

Government-funded military R&D is greater than sometimes supposed. During the period from 1981 through 1985, government military R&D averaged about 1.2 percent of the defense budget. In industry, however, levels of R&D investment are usually measured by comparing R&D expenditures to total sales. A ratio of 2 to 3 percent is considered substantial in most Japanese private-sector industries. On this basis (and considering procurement as "sales"), government R&D expenditures amounted to about 4.8 percent of equipment procurement during the 1981-85 period. This level of investment is probably stretched further by counterpart R&D funds provided by private-sector firms working on JDA R&D contracts (see below).

Government military R&D is increasing. In September 1985 the National Defense Council and Cabinet approved military R&D at 1.8 percent of the military budget, with progressive increases to reach a level of 2.5 percent of the JDA budget in 1990.

TRDI R&D projects for Japanese fiscal year 1985 (April 1985 to March 1986) included technology relating to aircraft, guided weaponry, artillery and munitions, combat vehicles, electronics, and underwater weapons.

Table

Selected TRDI R&D Projects for 1985

<u>Category</u>	<u>Item</u>	<u>Year Begun</u>
Aircraft	XT-4 intermediate class training aircraft	1981
	XJ/AQM-1 target drone	1983
	XSH-60J ship-based ASW helicopter system	1983
Guided Weaponry	XATM-3 medium antitank missile	
	ASM-1 surface-to-ship missile	
	XAAM-3 air-to-air missile	1978
	XGCS-1 bomb guidance and control system	1985
Artillery and Munitions, Combat Vehicles	TK-X main battle tank (MBT)	
	AW-X self-propelled antiaircraft gun	
	armor-piercing 20mm projectile for close-in weapon system	
	scout/warning vehicle	
Electronics	infantry fighting vehicle	
	FPS-1, FPS-2 advanced aircraft control and warning radar	1983
Underwater Weapons	S-8 deep-moored sweeping gear	
	towed array surveillance system	1982
	GRX-3 antisubmarine torpedo	

Sources: Japan Defense Agency, Defense of Japan 1985 (Tokyo: The Japan Times, Inc., 1985), p. 296; JPRS-JST-019-L, 20 February 1985, p. 16; JPRS-JST-023-L, 8 March 1985, p. 36; JPRS-JST-029-L, 2 April 1985, p. 43; JPRS-JST-033-L, 11 April 1985, p. 15; JPRS-JST-034-L, 15 April 1985, p. 53, JPRS-JST-042-L, 14 May 1985, pp. 43, 44, 49, 50, 52, 54, 59, 60, 62.

In 1984, US Department of Defense specialists expressed interest in several technologies being developed by TRDI, including forward-looking infrared (FLIR) and night-vision devices, tunable laser sources, fiber-optic gyros, infrared-missile seekers, and a sea-skimming, antiship missiles.

Private Sector Research and Development

As with government military R&D, private sector military R&D may be much greater than commonly reported. Although hard evidence is lacking, there is a consensus of expert opinion that companies may be required to contribute R&D costs for projects undertaken jointly with TRDI, just as they do in non-military fields, such as artificial-intelligence research. Companies may share R&D costs on TRDI projects in hopes of getting a procurement contract when a prototype is completed. The government also may stimulate independent military R&D by allowing companies credit for prior R&D expenditures in awarding production contracts. Such R&D cost-sharing would mean a potentially significant multiplier effect on TRDI expenditures for military R&D.

Japanese companies also conduct R&D of technology with potential military applications, sometimes referred to as "defense-related dual-use technology (DRDU)." Research on such technologies, which are owned by the commercial sector, is coordinated by MITI, which also regulates overseas transfer of such technologies.

COCOM RESTRICTIONS AND JAPAN'S DUAL-USE TECHNOLOGY

As Tokyo reached agreement with Washington concerning transfer of DRDU technology to the United States, Japanese industries and the Japanese Government moved to clarify Japan's position with respect to restrictions of the Coordinating Committee for Control of Exports to Communist countries (COCOM). Both the Soviet Union and China have expressed interest in restricted technology, and there have been some Japanese firms disciplined by MITI for shipping restricted products to Eastern Europe. Since 1983, Japan's position has been influenced by a reduction of COCOM restrictions on exports to China and by the tightening of COCOM oversight on exports to the USSR.

China

The United States gradually liberalized its own policies concerning sale of military items and dual-use technology following the 1981 Department of State announcement that commercial arms sales to China would be approved on a case-by-case basis. The United States further liberalized the sale of dual-use technology to China in 1983, authorized US Foreign Military Sales in 1984, and began direct government-to-government sales to China in September 1985 with export of an artillery munitions plant.

Since the sale by Hitachi of a meteorological computer in 1978, Japan has exported large computers to China. That deal and the sale of a medium-sized system to the People's Bank of China in 1979 were reported to COCOM and eventually received COCOM approval. In January 1986, COCOM modified its rules on computer exports to China to permit the sale of large computer systems.

Subsequently, Japanese computer firms have had to go through domestic procedures only to receive export clearance, and have not had to receive COCOM permission. Exports of high-purity silicon wafers were also scheduled to begin in the summer of 1986.

These developments and others, such as the conclusion by the United States of a nuclear energy agreement with China in 1984, will be likely to facilitate Japanese high-technology exports to China, including the export of dual-use technology. In 1983, the United States sought to use COCOM rules to restrict a Japanese sale to China of computer-controlled telephone exchange switchboards, but withdrew its objections in response to Japanese pressure.

In 1985 Japan and China signed a technology-transfer agreement that included provision for sales of nuclear-power facilities and other forms of technical cooperation. Although a separate agreement on military exchanges reportedly ruled out sales of military technology, the agreement increases the likelihood that dual-use technology will be sold. For example, in 1984, China requested the assistance of the Japanese Government concerning technologies relating to the launching and operation of weather, communications, and resource-prospecting satellites.

Given increasing US military sales to China, the chief factor influencing Japanese sales of dual-use technology to China is likely to be China's willingness to protect Japanese patents, for example by joining the Paris Convention protecting industrial property patents.

Soviet Union and Eastern Europe

Japan's adherence to COCOM restrictions respecting transfer of technology to Soviet bloc countries received increased attention after a 1982 tightening of COCOM rules in the wake of the Soviet invasion of Afghanistan.

In 1983, Japan rejected a Soviet request for visas for a railway-electrification mission, citing possible military applications of technology used in Japan's high-speed train system. Foreign Minister Abe Shintaro linked such technology transfers with Soviet military expansion. In the same year, the United States also requested the Government of Japan to cooperate more closely to work out a framework for preventing the transfer of militarily useful technology to the Soviet Union.

In December 1984, the Soviet Union proposed a program of technological cooperation with Japan. Some items on the Soviet list of desired technologies either conflicted with COCOM rules or were clearly related to the Strategic Defense Initiative research program. Examples of the latter included laser and power transistor technologies. The Soviet request was tabled by the Japanese Government, although some Japanese business firms were reportedly interested in the possibilities of trade with the Soviet Union.

In 1985, several cases of violation of COCOM restrictions were investigated by Japanese customs authorities and by MITI. In one case, programming equipment related to metal pattern machine tools was exported to the Soviet

Union over a 2-year period. MITI imposed a one-month suspension on the company involved and also on another company that sold Hungary a laser trimming system used to process semiconductors.

In early 1986, MITI released its own "Guidelines Concerning Export Procedures on Strategic Materials for Communist Countries," tightening approval procedures governing displays at trade fairs in Communist countries. Violations of the new guidelines will be punished by MITI under the Foreign Exchange Control Law. Japan agreed to participate in a Soviet-sponsored trade fair in Moscow in October or November. The purpose of the fair is ostensibly to allow Japanese firms to assist with the modernization of the Soviet economy. However, a number of the technologies of interest to the Soviet Union, including microprocessors, ceramics, and computer-assisted design and computer-assisted manufacturing (CAD/CAM) systems, may have military applications as well.

Prospects

The recent trend toward cooperation with the United States in adherence to COCOM restrictions--abetted by the Prime Ministership of Nakasone and the "military realism" of elements of the Liberal Democratic Party--may be short-lived. There were several long-term factors in Japan's economic and trade position that contributed to serious frictions concerning technology-transfer issues between Japan and the United States prior to the election of Nakasone and that may produce a lower degree of cooperation from his successor.

First, there are many officials in the Japanese Government who support a "comprehensive security" policy that would seek to maximize technical and economic relations with the Soviet Union and with bloc states as a means of increasing economic interdependence.

Second, for a number of years there have been strong commercial interests within Japan that seek to expand trade in all directions and that suspect that at least some US pressure on Japan to adhere to COCOM guidelines--for example with respect to computer sales to China in the late 1970s--has been motivated by a desire to give US firms a competitive advantage. This suspicion is strengthened by pressure from US companies for fewer restrictions on trade with the Soviet bloc, as exemplified by the fact that traditionally it has been the United States itself that has applied for a large number of exceptions to COCOM restrictions. In the early 1980s, Japan repeatedly rebuffed suggestions by US Government officials to link US-Japanese trade with Japanese-Soviet trade or with Japanese adherence or non-adherence to COCOM restrictions.

Third, Japan is aware that there is often disagreement among the United States and its other allies over the extent and nature of COCOM restrictions. Japan also has exhibited frustration over differences among US Government agencies on technology-transfer issues.

Finally, Japan's agreement on technology transfer with the United States, which reaffirms the private, commercial character of dual-use technology sales, may have the unintended effect of stimulating increased Japanese business interest in the deregulation of exports of such technology.